

AN APPARATUS AND METHOD OF DOPING SILICA  
WITH FLUORINE DURING LAYDOWN

**ABSTRACT OF THE DISCLOSURE**

A method for doping silica soot with fluorine during laydown, including  
5 providing a bait rod, and providing a burner, wherein the burner emits a reactant flame.  
The method also including providing at least one first gas-feed separate from the  
burner, wherein the gas-feed supplies a first jet of fluorine-based gases, and depositing  
a layer of silica soot on the bait rod by vaporizing a silica producing gas within the  
reactant flame of the burner. The method further including supplying the first jet of  
10 fluorine-based gases to the silica soot deposited on to the bait rod via the first gas-feed  
subsequent to vaporizing at least a portion of the silica producing gas within the  
reactant flame of the burner.

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